Session 5 - Editing a Map Session 5 - Editing a Map

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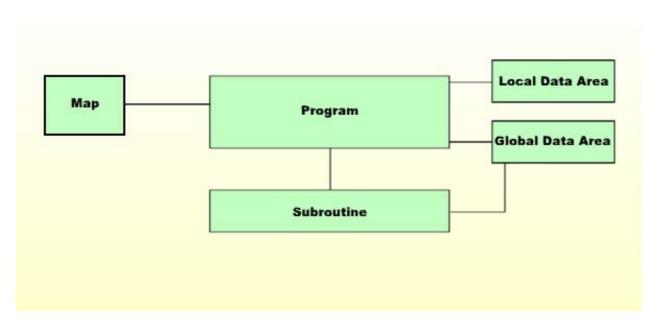
In the previous sessions, the screen (map) prompting for an employee name was invoked via the INPUT USING MAP statement. In this session, the map - MAP01 - will be edited to add an ending name for a range of employees and some new layout elements.

The Natural map editor is used to create and modify screen layouts quickly and efficiently. In this session, you will use several map editor line commands and field commands:

- A line command begins with two periods (..). You enter it at the beginning of a line, and it applies to the whole line in which you enter it.
- A field command begins with one period (.). You enter it at the beginning of a field, and it applies only to the field in which you enter it.

(The sessions in Tutorial - Using the Map Editor in the Natural Editors documentation also show you how to apply these commands to more than one line/field at a time.)

For detailed descriptions of all map editor commands, refer to Editing a Map in the section Map Editor in the Natural Editors documentation.



Listed below are Steps 1 to 12 of Session 5.

Step 1

To invoke the map editor, on the Development Functions menu, enter the code ${\bf E}$ and the type ${\bf M}$. The Edit Map menu will be displayed:

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```
16:51:35
                      ***** NATURAL MAP EDITOR *****
                                                                 2001-01-31
                                                       Library SYSTEM
User SAG
                               - Edit Map -
                  Code
                        Function
                         Field and Variable Definitions
                   D
                   E
                         Edit Map
                        Initialize new Map
                   I
                        Initialize a new Help Map
                   Η
                       Maintenance of Profiles & Devices
                   M
                   S
                        Save Map
                   Т
                        Test Map
                   W
                        Stow Map
                   ?
                        Help
                         Exit
            Code .. I
                         Name \dots
                                              Profile .. SYSPROF_
Command ===>
Enter-PF1---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                Exit Test Edit
     Help
```

The map editor provides an extensive help system, which you can invoke by entering a question mark (?) as code on the Edit Map menu. Take time to look through this help system so that you know what kind of help is available.

Step 2

2

To edit Map MAP01, on the Edit Map menu, enter the code **E** and the name MAP01. The editing screen of the map editor will be displayed:

```
Ob D CLS ATT DEL CLS ATT DEL
0b _
                               . T D Blnk T I ?
                                   A D
                                          _ A I
                                                      )
                                                M D
O D
                                    A N
                                                       &
                                    M I
                                    O I
    --010---+---+---030---+---+---050---+---+---070---+---
001
           Please enter starting name :XXXXXXXXXXXXXXXXXXXXX (. to exit)
Enter-PF1---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
    Help Mset Exit Test Edit -- - + Full < >
```

The editing screen will be displayed in split-screen mode. The top portion of the screen can be used, for example, to display view definitions; the upper right corner displays delimiter settings that apply for the map. The lower portion of the screen is the map editing area.

Map fields may be defined directly on the screen or they can be selected from a view (DDM) that is displayed in the upper portion of the screen. In this exercise, map fields will be defined directly on the screen.

Unlike the program editor and the data area editor, the map editor does not have a command prompt where you can enter Natural system commands. Many functions in the map editor are performed by using PF keys (the PF-key lines at the bottom of the screen show which function is assigned to which key).

The two screens below show the map editor screen for Map MAP01 as it will appear at the end of this session, and the display of the screen as it will appear when MAP01 is invoked while executing Program PGM01.

31/01/01 16:01:26.8	Software AG Employee Information	SYSTEM
	Please enter starting name Ending name	(. to exit)

Step 3

In the first line of the editing area, type the following text, as shown below:

```
Software AG Employee Information
```

Then insert two blank lines by entering the line command ..I(2) in the first six positions of the text you just typed in. The map now looks as follows:

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Step 4

In the first three positions of the line Software AG Employee Information, enter the line command "C. The text is now centered:

Step 5

Enter (*DATE, (*TIME and (*LIBRARY-ID as shown below:

*DATE, *TIME, and *LIBRARY-ID are Natural system variables. System variables all begin with an asterisk (*). When the program which invokes the map is executed, *DATE will display the current date, *TIME the current time, and *LIBRARY-ID your current library. For more information on system variables, see the Natural System Variables documentation.

The opening parenthesis "(" in front of the system variable is a delimiter character. A delimiter indicates the combination of class and attribute assigned to a field. In this case, the (delimiter identifies the fields as a non-modifiable, intensified, output-only fields. The currently valid delimiter characters are shown in the top right-hand corner of the map editing screen.

Class types (Column CLS) shown on this screen include:

Class Type	Description
Т	Text constant
A	Input field
О	Output-only field (non-modifiable)
M	Modifiable field (output and input field)

Attribute types (Column ATT) shown on this screen include:

Attribute Type	Description
D	Default (that is, non-intensified, non-blinking, etc.)
I	Intensified

By entering these delimiter characters directly in front of a field, you assign a class and attribute to that field. Other class and attribute combinations are possible. It is also possible to assign another delimiter character to a specific class/attribute combination.

After you have typed in the system variables along with the delimiter characters, press ENTER. The system variable names entered will be transformed on the map to a series of Xs:

```
Ob
                                  Ob D CLS ATT DEL
                                                   CLS ATT DEL
                                      T D Blnk
                                                   ΤI
                                                           ?
                                      A D
                                                    A I
                                                           )
                                       A N
                                                    M D
                                                           ۶
                                         I
                                       M
     --010--+---+---030--+---+--050--+---+--070--+-
001
(XXXXXXXX)
                   Software AG Employee Information
                                                     (XXXXXXXX)
(XXXXXXXXX
            Please enter starting name :XXXXXXXXXXXXXXXXXXX (. to exit)
```

Step 6

Add another field to the map. Type in as shown in the screen below:

```
Ending name :X(20)
```

The colon (:) indicates that the field is modifiable for user input, and is displayed intensified.

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```
Ob _
                                Ob D CLS ATT DEL CLS ATT DEL
                                . T D Blnk T I ?
                                          _ A I )
^ M D &
                                    A D
                                    A N
                                                O D +
                                    M I
                                    O I
    --010--+---+---030--+---+---050---+----+--070---+----
001
                 Software AG Employee Information (XXXXXXXX
(XXXXXXXX)
(XXXXXXXXXX
            Please enter starting name :XXXXXXXXXXXXXXXXXX (. to exit)
                        Ending name :x(20)
```

Press ENTER, and the new field is added, its length determined by the 20 Xs:

Step 7

This newly created field needs further definition before it can be processed in Program PGM01.

In the first two positions of the field, enter the field command **.E** as shown below:

```
CLS ATT DEL
                                 Ob D CLS ATT DEL
0b _
                                   T D Blnk T I
                                                          ?
                                            A 1 M D &
                                     A D
                                     A N
                                     M I :
                                                  O D +
001 \quad -010 --+--+---+--030 --+---+---050 --+----+--070 --+----
(XXXXXXXX)
                  Software AG Employee Information (XXXXXXXX
(XXXXXXXXXX
            Please enter starting name :XXXXXXXXXXXXXXXXXXXXXX (. to exit)
                        Ending name .EXXXXXXXXXXXXXXXXXXXX
```

This causes the extended field editing section to be invoked for the field you have marked with the command. (Another way to invoke extended field editing function is to position the cursor anywhere in the field and press PF5.)

The extended field editing section will be displayed in the top half of the screen:

AD= MIT'_'_	ZP= OF	F SG=	OFF	HE=			Rls 0
AL=	CD=	CV=					Mod Und
PM= DF=		DY=					
EM=							
001010	-++	030	++-	+05()++-	+	-070+
001010 (XXXXXXX					-		
					-		
(XXXXXXXX					-		
(XXXXXXXX	So	ftware AG	Employ	yee Informa	-	(XXX	XXXXX

The field Fld displays as field name a number (#001). Natural automatically assign such a number to every new field that is created in a map.

Step 8

Change the field name by typing #NAME-END over the field number. This name corresponds to the name of a user-defined variable which is defined in the local data area used by Program PGM01.

```
Fld #NAME-END
                                         Fmt A20
Rls 0
          CD= ___
                 CV= _____
                                         Mod Undef
PM= __ DF=
                  DY= _____
EM=
  (XXXXXXXX)
            Software AG Employee Information (XXXXXXXX
(XXXXXXXXX
        Please enter starting name :XXXXXXXXXXXXXXXXXXX (. to exit)
                 Ending name .EXXXXXXXXXXXXXXXXXXX
```

The map modifications are now complete. Press PF3 to leave the extended field editing section.

Press PF3 again to return to the Edit Map menu.

Step 9

Press PF4 to test the map. You will see a display of the map as it will appear when invoked from Program PGM01:

```
31/01/01 Software AG Employee Information SYSTEM
17:11:00.9

Please enter starting name ______ (. to exit)
Ending name
```

Press PF3 to end testing.

On the Edit Map menu, enter the code ${\bf W}$ to STOW the map for future use.

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Step 10

To leave the Edit Map menu, enter the code (.), and you will be returned to the Development Functions menu.

In the Command line, enter the command E PGM01. The program editor will be invoked and Program PGM01 will be read into the work area ready to be adjusted to the modified map.

Step 11

Until now, PGM01 included the instruction:

```
MOVE #NAME-START TO #NAME-END
```

Thus, the start value for the list displayed by the program was also the end value, which meant that in the example used the list contained only employees whose names were JONES. (Otherwise, all employees from JONES to the end of the alphabet would have been included in the report.) Now the map allows us to specify both a start value **and** an end value for the list to be output. However, an IF statement must be added to the program to handle a situation in which no end value is specified.

Change the program by inserting the following lines before the READ statement:

```
IF #NAME-END = ' '
MOVE #NAME-START TO #NAME-END
END-IF
```

Add comments to reflect program changes.

The program should now look as follows:

Program PGM01:

8

```
* Example Program 'PGM01' for Natural Tutorial
* PROGRAM NOW USES A LOCAL DATA AREA
* A GLOBAL DATA AREA AND TITLE HAVE BEEN ADDED AND
 THE DISPLAY STATEMENT HAS BEEN CHANGED
* THE SUBROUTINE IS NOW EXTERNAL
* A BEGINNING AND ENDING NAME ARE USED FOR THE OUTPUT
DEFINE DATA
 GLOBAL USING GDA01
  LOCAL USING LDA01
END-DEFINE
REPEAT
  INPUT USING MAP 'MAP01'
  IF #NAME-START = '.'
    ESCAPE BOTTOM
IF #NAME-END = ' '
   MOVE #NAME-START TO #NAME-END
  END-IF*
  RD1. READ EMPLOYEES-VIEW BY NAME
         STARTING FROM #NAME-START
         THRU #NAME-END
    IF LEAVE-DUE >= 20
      PERFORM MARK-SPECIAL-EMPLOYEES
    ELSE
      RESET #MARK
```

```
*

WRITE TITLE / '*** PERSONS WITH 20 OR MORE DAYS LEAVE DUE ***

/ '*** ARE MARKED WITH AN ASTERISK ***'//

*

DISPLAY 23X '//N A M E' NAME

3X '//DEPT' DEPT

3X '//LV/DUE' LEAVE-DUE

3X '//*' #MARK

*

END-READ

*

IF *COUNTER (RD1.) = 0

REINPUT 'PLEASE TRY ANOTHER NAME'
END-IF

*

END-REPEAT
END
```

Step 12

CHECK the program and correct any errors that may be indicated.

Then RUN the program. On the input screen, enter the names JONES and JOY as start value and end value respectively. The following output report will appear:

```
*** PERSONS WITH 20 OR MORE DAYS LEAVE DUE ***
     ARE MARKED WITH AN ASTERISK ***
          N A M E DEPT LV
                               DUE
     JONES
                        SALE30
                                25
                                34
     JONES
                        MGMT10
                       TECH10
                                11
     JONES
     JONES
                       MGMT10
                               18
                       TECH10
                               21
     JONES
                       SALE00
                               30
     JONES
     JONES
                       SALE20
                               14
     JONES
                        COMP12
                               26
     JONES
                               25
                       TECH02
                                32
     JOPER
                       MARK29
     JOUSSELIN
                        FINA01
                                45
```

STOW the program for future use.

At the command prompt, then enter a period (.) to return to the Development Functions menu.

End of Session 5.